LISTING OF CLAIMS

This listing of claims replaces all prior versions in the application:

1. (Currently Amended) A device for measuring the rotational unbalance of an article, comprising:

a) a spindle unit with a spindle holder and with a spindle mounted on the spindle holder rotatably about an axis of rotation and carrying at one of its two ends a coupling for fastening the article;

b) a holder suspension for fastening the spindle unit to a machine base, said holder suspension guiding the spindle holder deflectably in a predetermined measurement direction for unbalance forces;

c) an electric motor driving the spindle in rotation; and

d) a sensor arrangement measuring the unbalance force in the predetermined measurement direction during rotation of the spindle, wherein

the spindle unit and the electric motor are combined into a first preassembled subassembly and the holder suspension and the sensor arrangement are combined into a second preassembled subassembly, and ~~in that~~ wherein the two subassemblies carry connecting elements, assigned to one another in an indexed manner, ~~for the~~wherein the connecting elements operationally ~~releasable fastening of~~ releasably fasten the subassemblies to one another~~, such connecting elements~~.

2. (Previously Presented) The device as claimed in claim 1, wherein the electric motor is arranged axially parallel next to the spindle so as to be offset with respect to the axis of rotation of the spindle and is fastened to the spindle holder.

3. (Previously Presented) The device as claimed in claim 2, wherein the electric motor is arranged in such a way that a plane containing the axes of rotation of the electric motor and of the spindle is inclined with respect to an axial longitudinal plane of the spindle perpendicular to the predetermined measurement direction.

4. (Currently Amended) The device as claimed in claim 1, wherein the electric motor and the spindle holder are flanged to a common connecting yoke on the same side of the ~~latter~~connecting yoke.

5. (Previously Presented) The device as claimed in claim 4, wherein the end of the spindle which is remote from the fastening coupling is drive-connected to the electric motor by means of an endless drive belt.

6. (Previously Presented) The device as claimed in claim 1, wherein the fastening coupling of the spindle unit has a pneumatic actuating device, the compressed-air supply of which comprises a rotary compressed-air coupling which is held on the spindle holder and which is in constant rotational engagement with the spindle .

7. (Previously Presented) The device as claimed in claim 6, wherein the rotary compressed-air coupling is provided centrically to the axis of rotation of the spindle on a carrying arm which is arranged solely within the region surrounded by the drive belt.

8. (Currently Amended) The device as claimed in claim 1, wherein the holder suspension comprises two holder elements which are connected to one another deflectably in the predetermined measurement direction and of which one can be connected to the spindle holder and the other to the machine base, and ~~in that~~ wherein the sensor arrangement has at least one force sensor held between the two holder elements .

9. (Previously Presented) The device as claimed in claim 8, wherein the holder elements are arranged at a distance from one another and are held against one another by at least one spacer rigid in the distance direction and flexible transversely thereto at least in the measurement direction, in particular a plurality of such spacers.

10. (Canceled)

11. (Previously Presented) The device as claimed in claim 9, wherein the holder elements have projections which project in pairs toward one another and between which the force sensor is arranged.

12. (Previously Presented) The device as claimed in claim 8, wherein the holder elements are arranged at a distance from one another and are held against one another by at least one spacer flexible in the distance direction defining the measurement direction and essentially rigid transversely thereto.

13. (Canceled)

14. (Previously Presented) The device as claimed in claim 8, wherein the sensor arrangement has two force sensors which are arranged at a distance from one another in the direction of the axis of rotation of the spindle and are held between the two holder elements and which are supported mirror-symmetrically on the two holder elements with respect to an axial longitudinal plane of the spindle perpendicular to the force measurement direction.

15. (Previously Presented) The device as claimed in claim 8, wherein each force sensor is assigned a spring element prestressing the force sensor in the predetermined force measurement direction.

16. (Previously Presented) The device as claimed in claim 15, wherein the force sensor and the spring element assigned to it are supported, prestressed, in series with one another on one of the two holder elements, and the other holder element is supported on the force sensor in the force path between the force sensor and the spring element.

17. (Currently Amended) The device as claimed in claim 15, wherein at least one of the force sensor and/~~or~~ the spring element is held in the force measurement direction on both sides between pivot bearings, particularly balls or tips.

18 – 31. (Canceled)

32. (New) A device for measuring the rotational unbalance of an article, comprising:

a) a spindle unit with a spindle holder and with a spindle mounted on the spindle holder rotatably about an axis of rotation and carrying at one of its two ends a coupling for fastening the article;

b) a holder suspension for fastening the spindle unit to a machine base, said holder suspension guiding the spindle holder deflectably in a predetermined measurement direction for unbalance forces;

c) an electric motor driving the spindle in rotation; and

d) a sensor arrangement measuring the unbalance force in the predetermined measurement direction during rotation of the spindle, wherein

the spindle unit and the electric motor are combined into a first preassembled subassembly and the holder suspension and the sensor arrangement are combined into a second preassembled subassembly, and wherein the two subassemblies carry connecting elements, assigned to one another in an indexed manner, wherein the connecting elements operationally releasably fasten the subassemblies to one another;

wherein the holder suspension comprises two holder elements which are connected to one another deflectably in the predetermined measurement direction and of which one can be connected to the spindle holder and the other to the machine base, and wherein the sensor arrangement has at least one force sensor held between the two holder elements;

wherein the holder elements are arranged at a distance from one another and are held against one another by at least one spacer rigid in the distance direction and flexible transversely thereto at least in the measurement direction, in particular a plurality of such spacers; and

wherein the spacers are designed as leaf springs, the leaf spring plane of which runs perpendicularly to the measurement direction.

33. (New) A device for measuring the rotational unbalance of an article, comprising:

a) a spindle unit with a spindle holder and with a spindle mounted on the spindle holder rotatably about an axis of rotation and carrying at one of its two ends a coupling for fastening the article;

b) a holder suspension for fastening the spindle unit to a machine base, said holder suspension guiding the spindle holder deflectably in a predetermined measurement direction for unbalance forces;

c) an electric motor driving the spindle in rotation; and

d) a sensor arrangement measuring the unbalance force in the predetermined measurement direction during rotation of the spindle, wherein

the spindle unit and the electric motor are combined into a first preassembled subassembly and the holder suspension and the sensor arrangement are combined into a second

preassembled subassembly, and wherein the two subassemblies carry connecting elements, assigned to one another in an indexed manner, wherein the connecting elements operationally releasably fasten the subassemblies to one another;

wherein the holder suspension comprises two holder elements which are connected to one another deflectably in the predetermined measurement direction and of which one can be connected to the spindle holder and the other to the machine base, and wherein the sensor arrangement has at least one force sensor held between the two holder elements;

wherein the holder elements are arranged at a distance from one another and are held against one another by at least one spacer flexible in the distance direction defining the measurement direction and essentially rigid transversely thereto; and

wherein the spacer is designed as a U-shaped leg spring.

34. (New) A device for measuring the rotational unbalance of an article, comprising:

a) a spindle unit with a spindle holder and with a spindle mounted on the spindle holder rotatably about an axis of rotation and carrying at one of its two ends a coupling for fastening the article;

b) a holder suspension for fastening the spindle unit to a machine base, said holder suspension guiding the spindle holder deflectably in a predetermined measurement direction for unbalance forces;

c) an electric motor driving the spindle in rotation; and

d) a sensor arrangement measuring the unbalance force in the predetermined measurement direction during rotation of the spindle, wherein

the spindle unit and the electric motor are combined into a first preassembled subassembly and the holder suspension and the sensor arrangement are combined into a second preassembled subassembly, and wherein the two subassemblies carry connecting elements, assigned to one another in an indexed manner, wherein the connecting elements operationally releasably fasten the subassemblies to one another;

wherein the connecting elements of the two subassemblies have joining faces which are intended to bear against one another and which allow predetermined positioning in the predetermined measurement direction and in at least one direction perpendicular thereto.

35. (New) The device as claimed in claim 34, wherein the connecting elements are designed as a dovetail guide and comprise clamping means for fixing.

36. (New) The device as claimed in claim 35, wherein the displacement direction of the dovetail guide runs in the direction of the axis of rotation of the spindle.

37. (New) The device as claimed in claim 35, wherein the dovetail guide has dovetail guide faces, one of which is integrally formed directly on the spindle holder.

38. (New) The device as claimed in claim 37, wherein the spindle holder has essentially a cylindrical outer contour which surrounds the integrally formed dovetail guide face on the outside.

39. (New) The device as claimed in claim 35, wherein the dovetail guide is assigned an indexing limit stop in the displacement direction.

40. (New) The device as claimed in claim 35, wherein the dovetail guide has mutually assigned dovetail guide faces with bayonet cutouts which allow plugging together transversely to the displacement direction of the dovetail guide.

41. (New) The device as claimed in claim 34, wherein the connecting elements are provided on the spindle holder and the holder suspension.

42. (New) A device for measuring the rotational unbalance of an article, comprising:

a) a spindle unit with a spindle holder and with a spindle mounted on the spindle holder rotatably about an axis of rotation and carrying at one of its two ends a coupling for fastening the article;

b) a holder suspension for fastening the spindle unit to a machine base, said holder suspension guiding the spindle holder deflectably in a predetermined measurement direction for unbalance forces;

c) an electric motor driving the spindle in rotation; and

d) a sensor arrangement measuring the unbalance force in the predetermined measurement direction during rotation of the spindle, wherein

the spindle unit and the electric motor are combined into a first preassembled subassembly and the holder suspension and the sensor arrangement are combined into a second

preassembled subassembly, and wherein the two subassemblies carry connecting elements, assigned to one another in an indexed manner, wherein the connecting elements operationally releasably fasten the subassemblies to one another;

wherein there is fastened at one of the axial ends of the spindle, in particular at the end carrying the fastening coupling for the article, an annular surface element, the circumference of which is provided with a magnetic or optical information carrier both for information representing the angle of rotation and for information representing the zero-point rotary position, and in that a reading head arrangement for reading this information is connected to the spindle holder.

43. (New) The device as claimed in claim 42, wherein the information carrier has next to one another two information tracks which are sensed separately from one another by the reading head arrangement.

44. (New) The device as claimed in claim 42, wherein the information carrier is designed as a magnetic tape portion which is glued onto the circumference of the annular surface element and the mutually abutting ends of which are cut obliquely in the tape plane.

45. (New) The device as claimed in claim 44, wherein the information representing at least one of the angle of rotation and the zero-point rotary position also overlaps the region of the oblique-cut joint of the magnetic tape portion.

46. (New) The device as claimed in claim 42, wherein the information carrier is designed as an optical information carrier, particularly in the form of an annular disk, which can be sensed by transmitted light.

47. (New) The device as claimed in claim 42, wherein the annular surface element has, on its surface facing away from the spindle, optical angular degree markings.